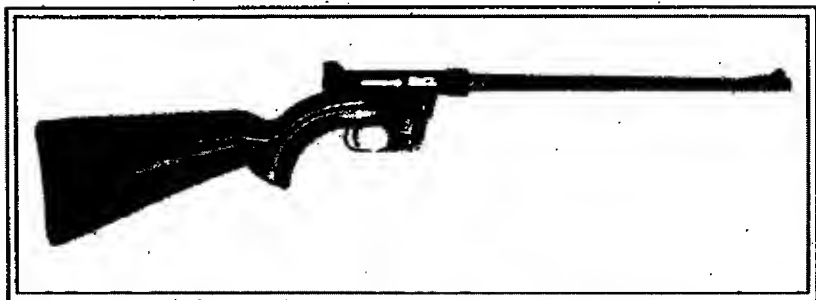


AR-7 SURVIVAL RIFLE



DO EVERYTHING MANUAL
ASSEMBLY
DISASSEMBLY
LUBRICATION
AMMUNITION
MAINTENANCE
STORAGE

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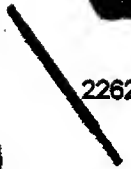
WARNING

We have strived to give you the safest AR-7 Manual possible! Please be advised however, that the entity performing any operations assumes all risk associated, including any legal responsibilities concerning devices or instructions detailed in this manual.

This manual is Presented for Your Enjoyment, Information, Educational, or Investment Purposes Only.

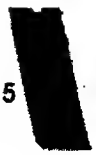
The purchase or ownership of this manual constitutes a release of M&M ENGINEERING's responsibility for injuries, property damage, or legalities incurred. Due to the wide variations in the operations detailed here and the testing procedures used in this manual, it would clearly be impossible to maintain control over any operations detailed, or their use.

Therefore M&M ENGINEERING nor the AUTHOR cannot and Will not accept any responsibility for any instructions, devices or modifications as detailed in this manual.



Handwritten text: "Handwritten text: '2223' and '2223' with arrows pointing to components 2252 and 2253"

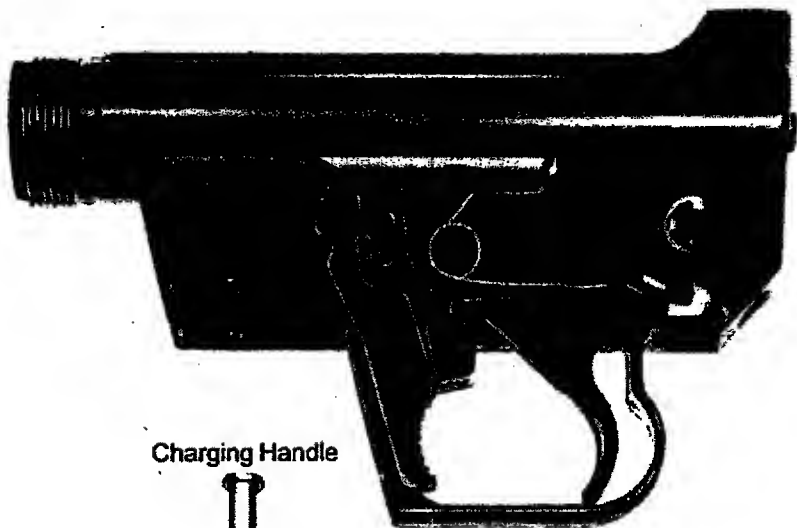
2252



NOMENCLATURE

PLEASE USE PART NUMBERS & NAME WHEN ORDERING
REPLACEMENTS

2252	_____	Action Spring
2253	_____	Action Spring Guide
2221	_____	Barrel
2247	_____	Barrel Nut
2230	_____	Bolt
2232	_____	Charging Handle
2243	_____	Ejector
2308	_____	Ejector Pivot Pin
2231	_____	Extractor
2254	_____	Extractor Spring
2326	_____	Extractor Roll Pin
2237	_____	Firing Pin
2327	_____	Firing Pin Roll Pin
2239	_____	Hammer
2248	_____	Hammer and Trigger Spring
2322	_____	Hammer and Trigger Spring Support Pin
2244	_____	Hammer Pivot Pin
2315	_____	Magazine
2251	_____	Magazine Latch Spring
2242	_____	Magazine Latch
2311	_____	Rear Sight Press Nut
2233	_____	Receiver
2235	_____	Receiver Side Plate
2250	_____	Receiver Side Plate Screw
2329	_____	Safety Ball Detent
2330	_____	Safety Snap Ring
2801	_____	Safety Sub-Assembly
2245	_____	Rear Sight
2249	_____	Rear Sight Screw
2222	_____	Front Sight
2256	_____	Stock
2262	_____	Stock Take Down Screw
2260	_____	Stock Take Down Screw Nut
2328	_____	Stock Take Down Screw Nut Roll Pin
2258	_____	Stock Butt-Cap
2238	_____	Trigger
2308	_____	Trigger Pivot Pin



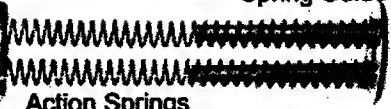
Charging Handle



Bolt Assembly



Spring Guide



Action Springs

Hammer & Trigger Spring Retaining Pin

Hammer



Trigger Pivot Pin



Hammer Pivot Pin

Trigger

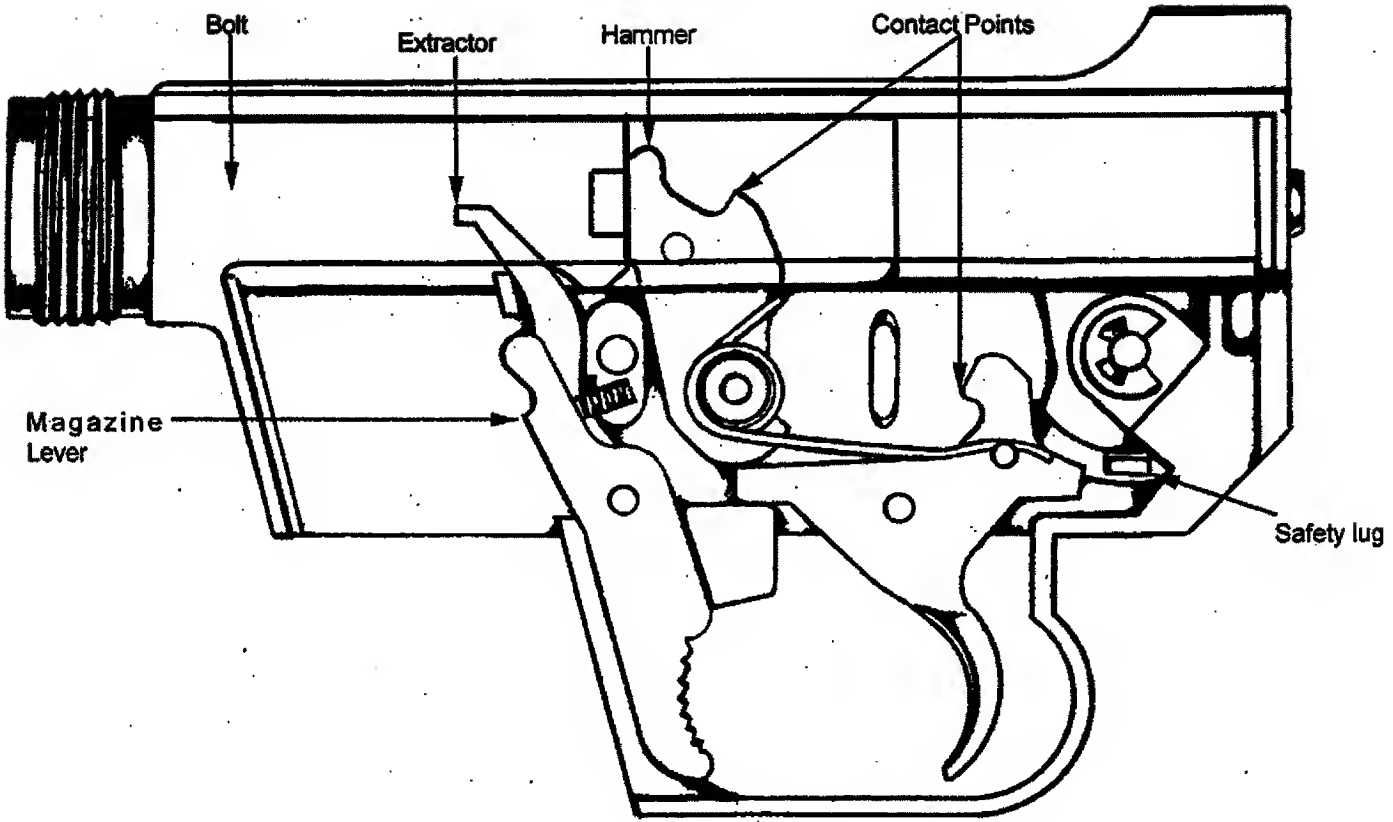
Magazine Latch Spring



Ejector Pivot Pin

Magazine Latch

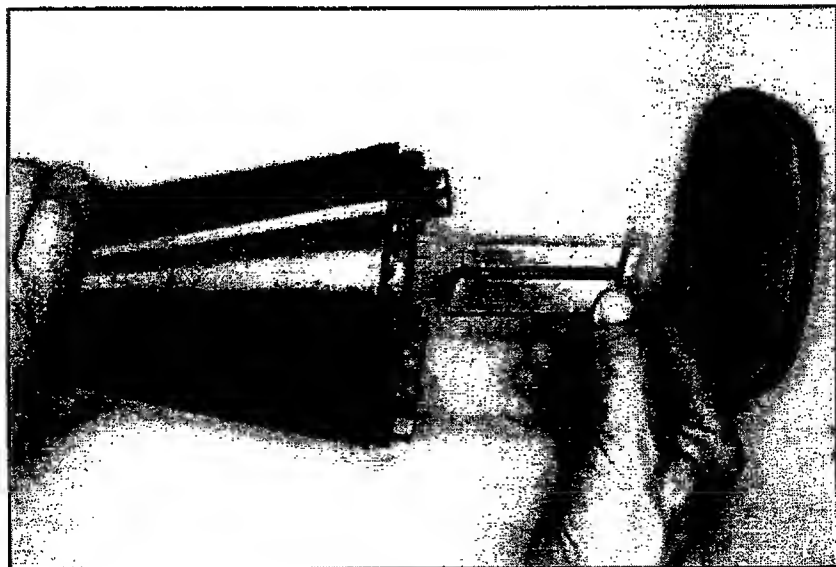
Hammer & Trigger Spring





With the Stock in your left hand, grasp the butt cap with your thumb on the serrated grip and pull cap from the stock.

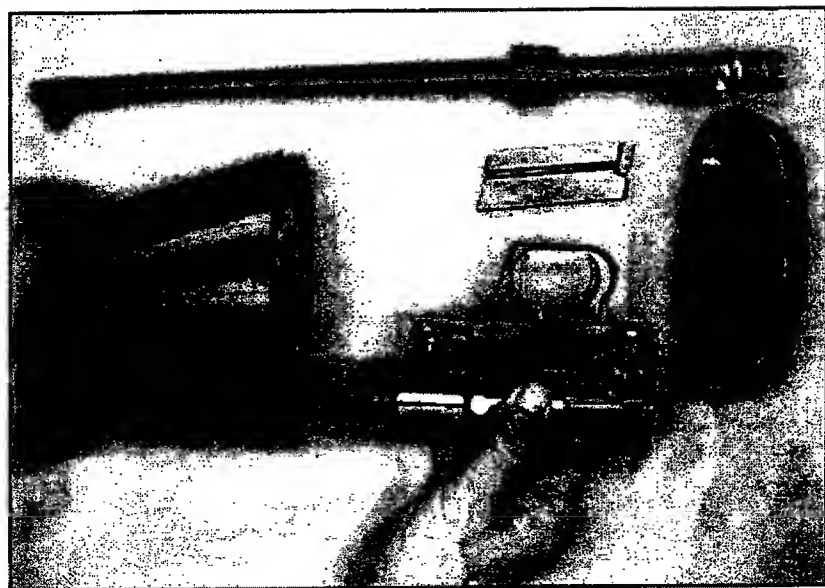
Withdraw the magazine.

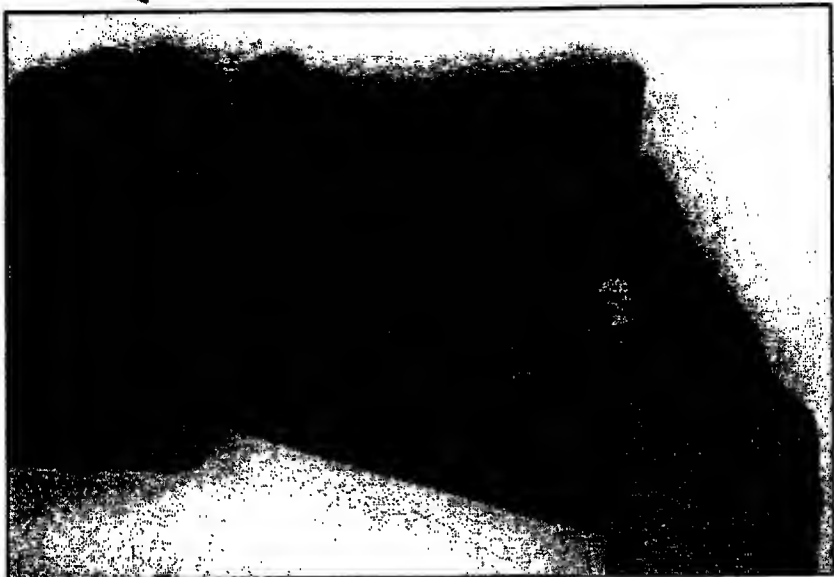




Withdraw the barrel assembly.

Withdraw the receiver assembly.

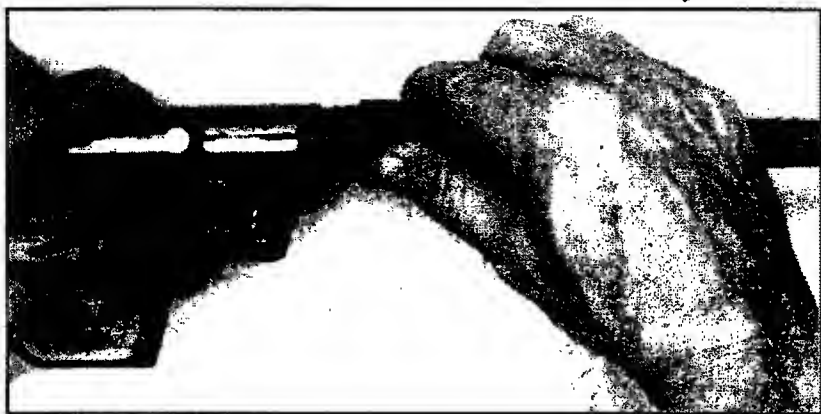




Begin assembly by snapping on butt cap.

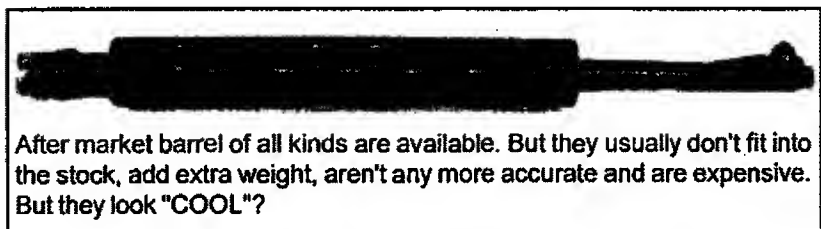
Place receiver into position and turn the take down screw clockwise onto butt stock. Periodically check screw for tightness.





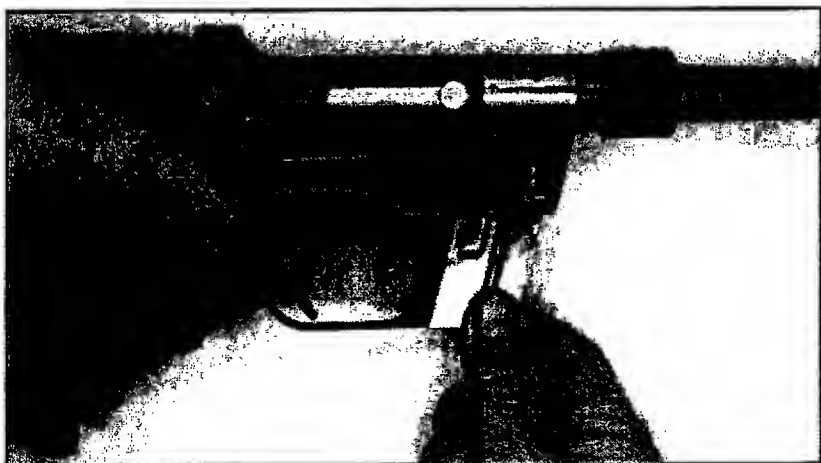
Align barrel lug with the cut in the receiver and screw the barrel nut clockwise onto the receiver threads.

Check function of bolt by drawing charging handle all the way and rechecking barrel nut for tightness. Periodically check for tightness of barrel nut.



After market barrel of all kinds are available. But they usually don't fit into the stock, add extra weight, aren't any more accurate and are expensive. But they look "COOL"?

Install the empty magazine and check that the magazine lock holds magazine in receiver. Follow all safety procedures before loading.



BARREL DISASSEMBLY



To disassembly the barrel. Use a drift punch to push the front sight from right to left, as shown. Instal from left to right

With the front sight removed you can slip the barrel nut off. Remove the barrel nut washer. Clean and inspect for cracks, wear, or damage. Oil lightly and reassemble in reverse.



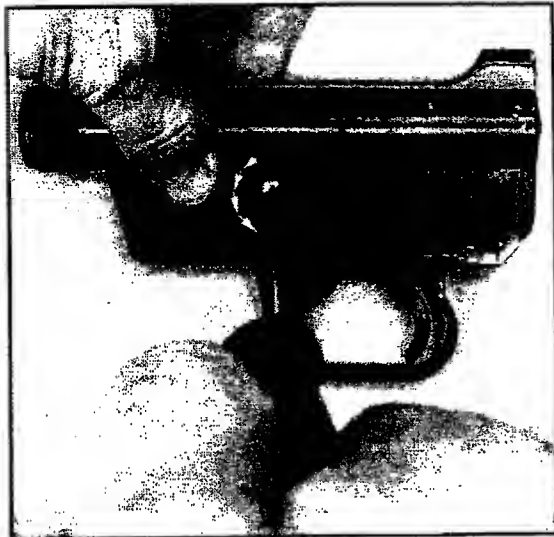
RECEIVER DISASSEMBLY



Begin receiver disassembly by removing the rear sight screw counter clockwise, and remove the rear sight.

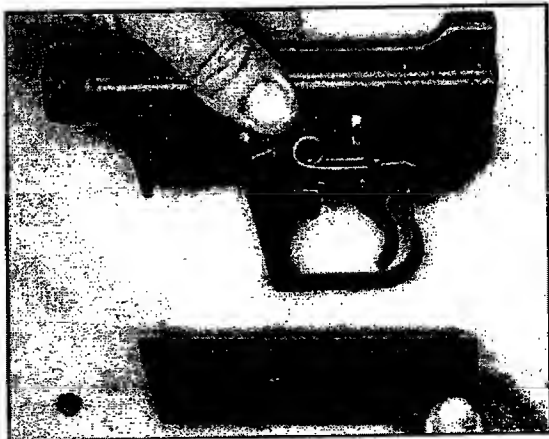


Make sure that the rear sight is bowed outward in the center so that the rear sight screw compress the rear sight against the receiver during assembly. Do Not remove rear sight press nut.

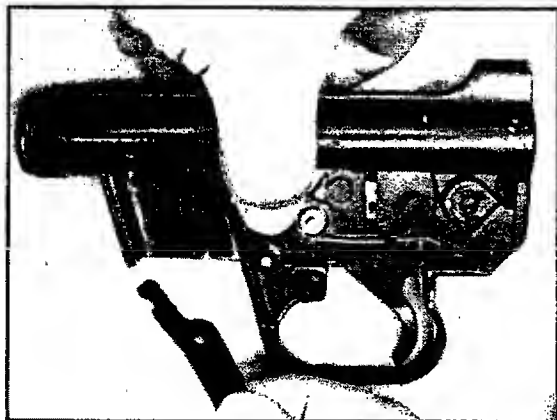
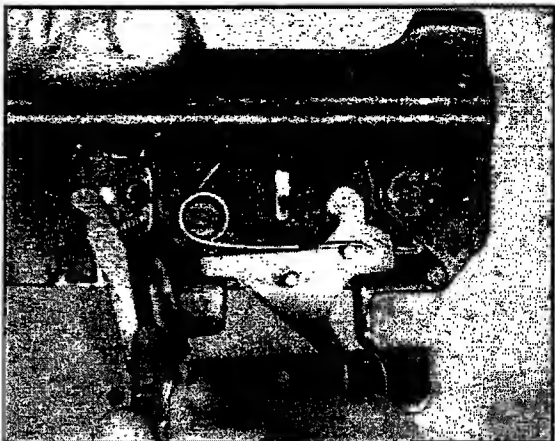


Remove the receiver cover by unscrewing the cover screw counter clockwise.

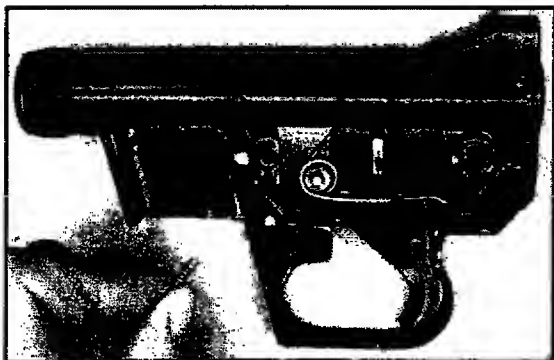
Lift off the receiver cover carefully so as not to dislodge the internal parts.



Examine the magazine lever spring. It will fly out and may become lost if not contained.

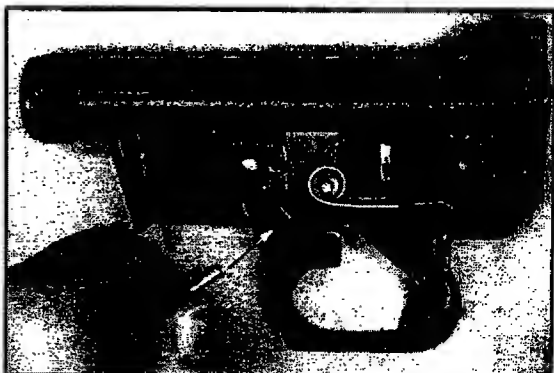


With your thumb over the magazine lever spring, slip the magazine lever from its pin.

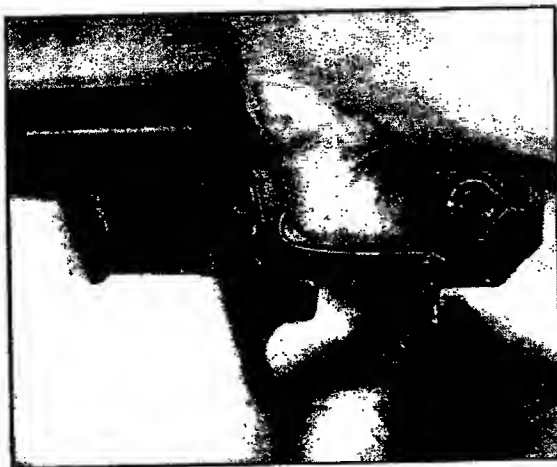
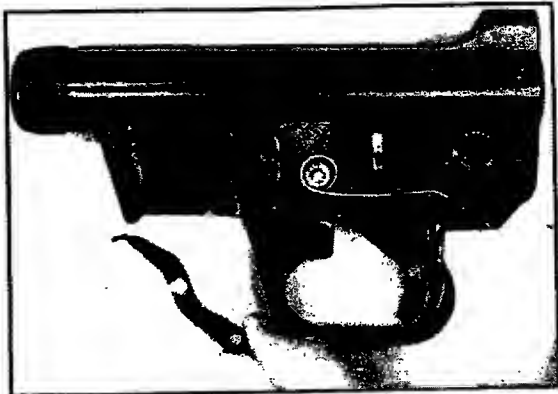


With the pressure removed from the magazine spring by the removal of the magazine lever, the spring is lifted from its cut in the receiver.

Remove the magazine & ejector pin from the receiver. The magazine lever pin is slightly shorter than the trigger pin and are not interchangeable.



Lift the extractor from the receiver. Carefully examine the extractor for cracks or deformation.

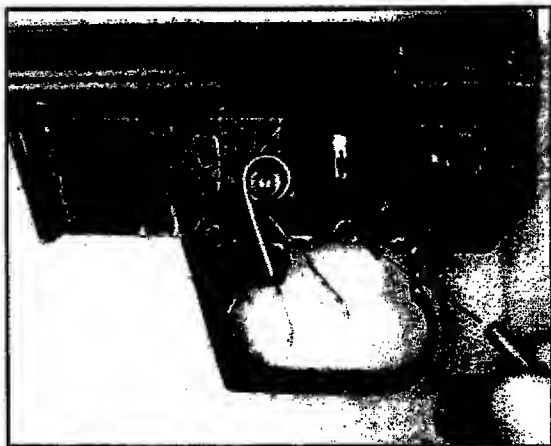


Gripping the rear of the receiver with your left hand as shown, with your thumb on the hammer catch of the trigger and your right thumb on the trigger paw, draw up from the trigger pin, being careful not to loose the hammer & trigger spring support pin.

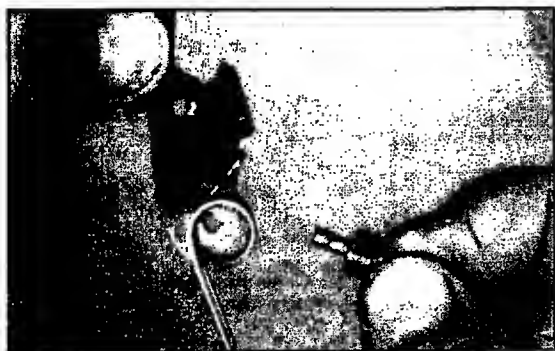


Remove the hammer & trigger spring support pin front the trigger.

Remove the trigger pin from the receiver. The Magazine lever pin is slightly shorter then the trigger pin and are not interchangeable.

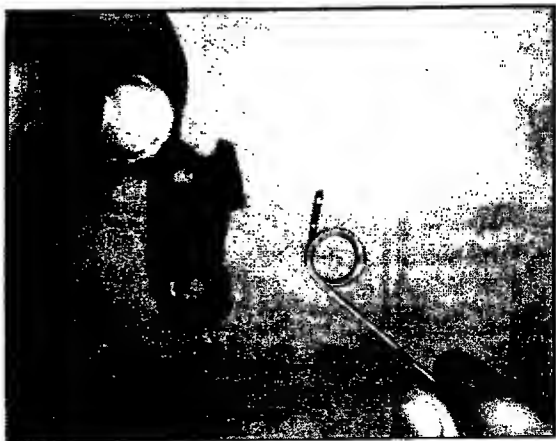


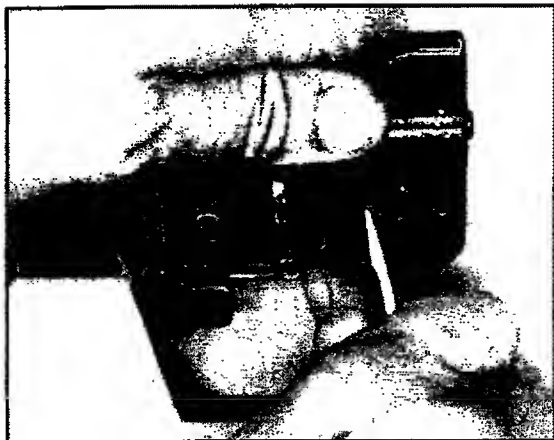
Lift the hammer with its hammer pivot pin, hammer & trigger spring from the receiver.



Now lift the hammer pivot pin from the hammer.

And remove the hammer & trigger spring from the hammer.



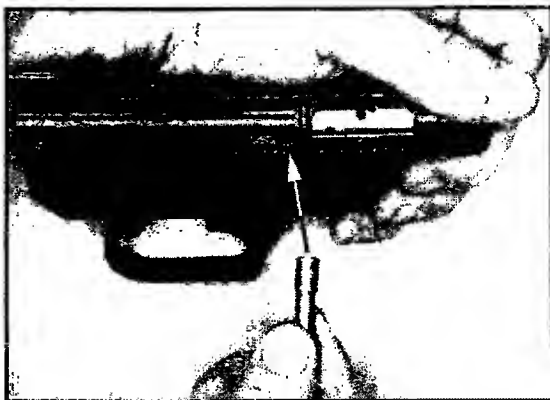


Using a straight bladed screwdriver remove the safety snap ring.

Flip the receiver over on the right side and lift out the safety lever. You should not remove the safety ball detent.



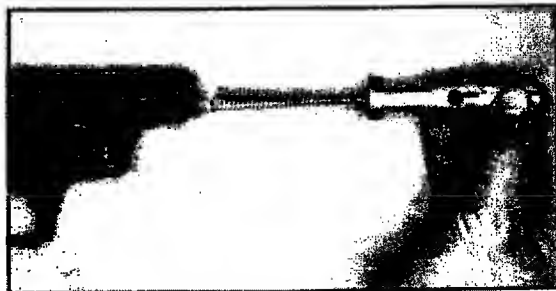
Using your left index finger push the face of the bolt in to align the charging handle with its larger opening in the charging handle slot in the receiver and slide the charging handle out. Release your finger slowly.



ASSEMBLY TIP:

When installing the bolt into the rifle the action spring guide should be placed onto the action springs, and the springs inserted into the bolt. Holding the bolt down with the springs up, slide the receiver over the action spring guide, springs and bolt, making sure they slide straight into the bolt and that the springs don't kink.

Gradually release pressure from the bolt and withdraw from the receiver.





Remove the action
springs from the bolt

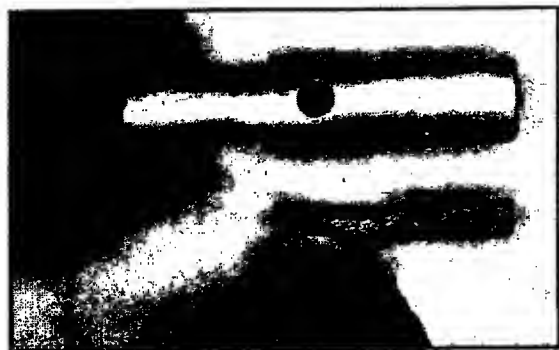
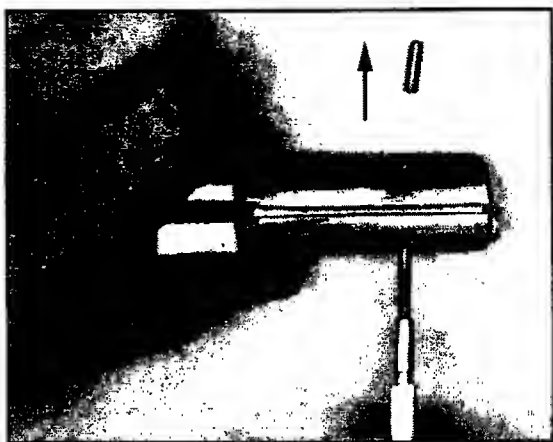
ASSEMBLY TIP:

Lightly lubricate the action spring guide, springs and the bolt to ensure free movement of the bolt during recoil. Do not use too much oil as it will promote sluggish bolt operation. Thoroughly clean the receiver and lightly lubricate all surfaces.

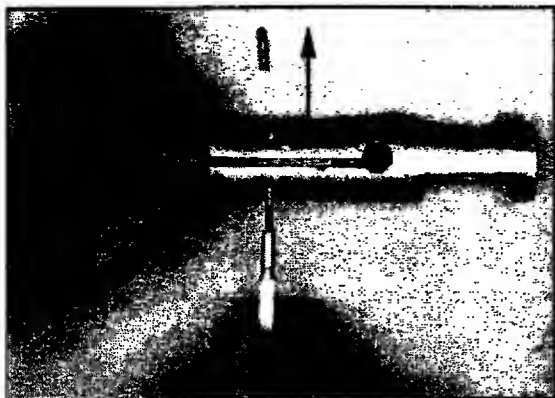
Tip the receiver downward and remove the action spring guide.



Using a drift, drive out the firing pin roll pin from right to left. Assembly in reverse.

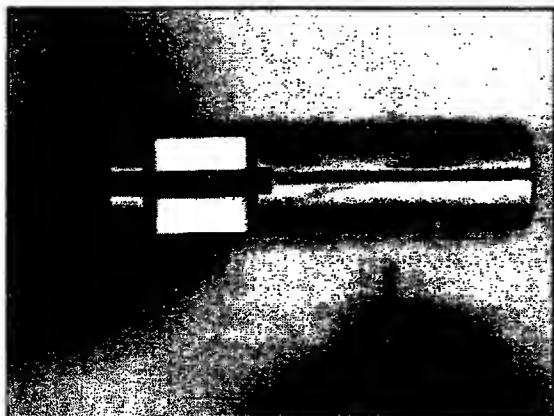
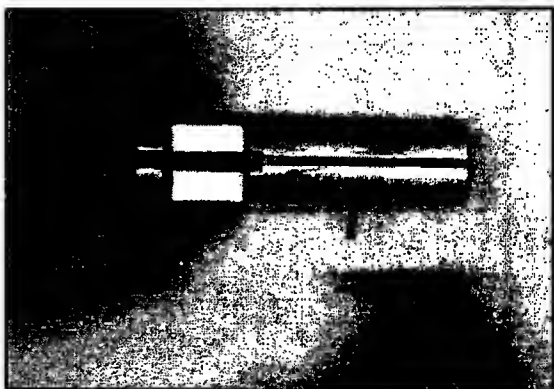


Lift the firing pin from the bolt. During assembly, check for free movement of the firing pin.



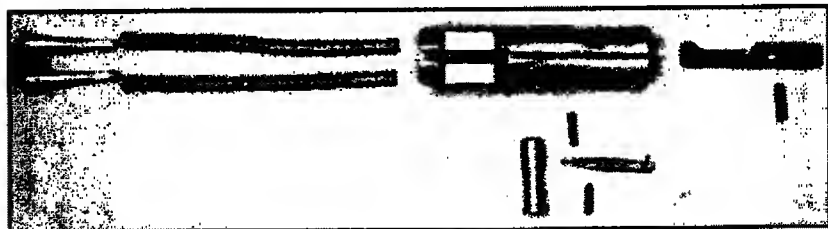
Using a drift, drive out the extractor roll pin from the bolt, top to bottom. Assembly in reverse. The firing pin roll pin and the extractor roll pin are interchangeable.

Lift out the extractor from the bolt. Being careful not to lose the extractor spring.



Lift out the extractor spring from the bolt.

The individual parts should be thoroughly cleaned and inspected for wear, cracks, bent or weak springs, loose pins and bent or sticking parts. Reassemble in reverse order. Your bolt will not look exactly like the one pictured here. This bolt has been lightened to shoot subsonic ammunition reliably.



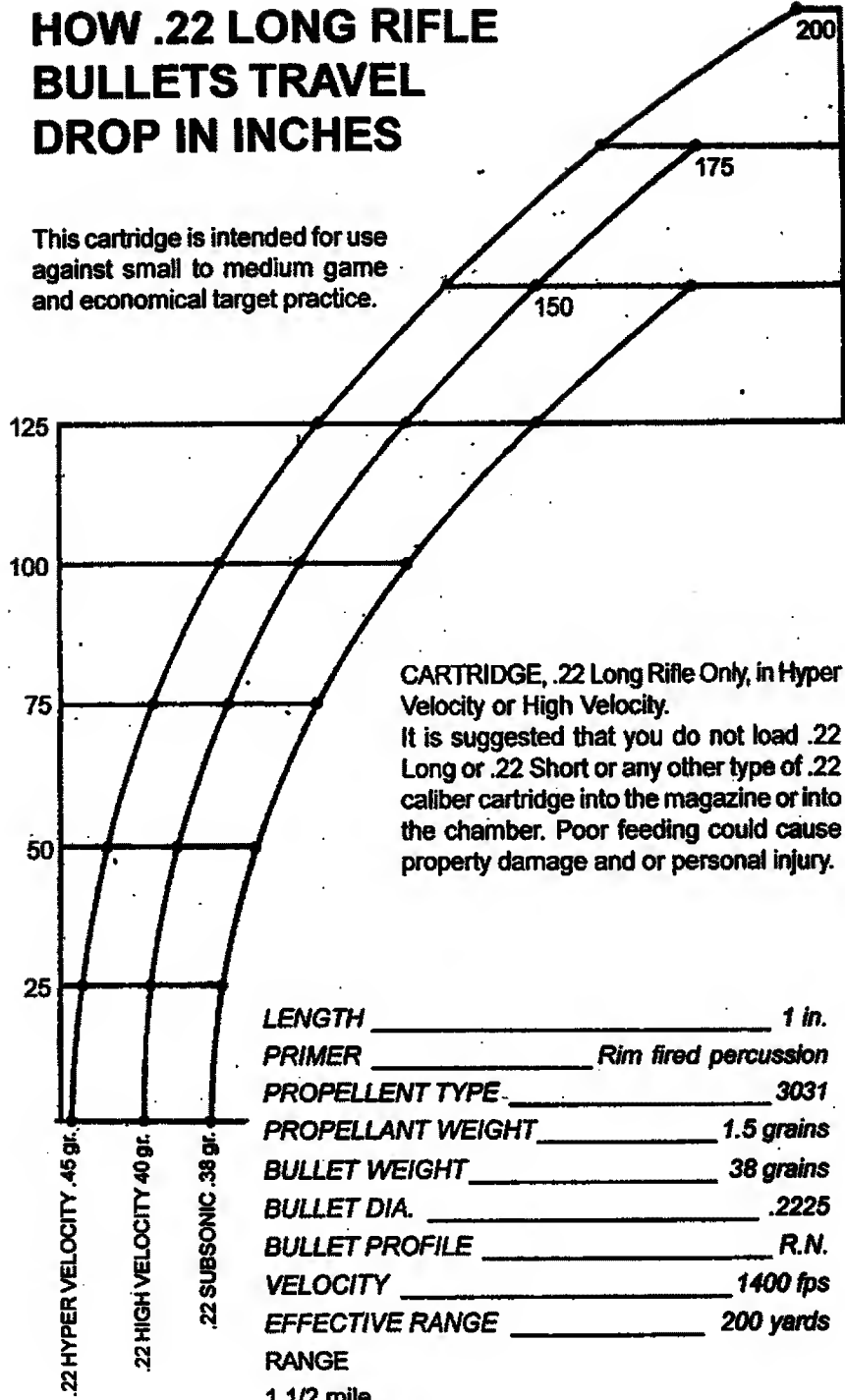
The lower pressures experienced with subsonic ammunition will not produce the energy required to recoil the bolt sufficiently to function the AR-7 semiautomatically. Experience has shown that reducing the recoil spring wire diameter, number of coils or the alloy to allow the lower pressure ammunition to recoil the bolt sufficiently to eject the spent cartridge will not possess the required energy to strip a fresh cartridge from the magazine and fully chamber the cartridge. Therefore, the only alternative available is to reduce the mass weight of the bolt. Experienced machinist can manufacture a new bolt from a Hardenable grade of aluminum. 6061 is the least expense and most versatile aluminum alloy. It has a very high resistance to corrosion and can be machined by all common methods. 5052 is the highest in strength, easily machined and fully heat-tractable. It's fatigue strength/duration is higher then any other aluminum alloy and has exceptionally high resistances to chemically corrosive agents.

The reduction of weight need go no further than removal of mass weight from non-stressed areas of the factory bolt. A bolt weight reduction will reduce the required recoil forces needed to operate semiautomatically. It would be inadvisable to fire standard ammunition with a low weight bolt as detailed here, the recoil forces would drive the bolt against the action spring guide at or beyond it's designed stress limits. Breakage of the firearm, it's parts, personal injury or damage may result.

But the reduction of the sound signature is so dramatically reduced when using subsonic ammunition that it is a "give and take" trade off that shouldn't be over looked. It would be wise to investigate the sound signature produced without bolt modifications by using standard subsonic ammunition before machine work on the bolt begins. The sound reduction using standard subsonic ammunition is, as said before, dramatic. Please check and comply with any and all laws prior to modification of any firearm.

HOW .22 LONG RIFLE BULLETS TRAVEL DROP IN INCHES

This cartridge is intended for use against small to medium game and economical target practice.



CARTRIDGE, .22 Long Rifle Only, in Hyper Velocity or High Velocity.
 It is suggested that you do not load .22 Long or .22 Short or any other type of .22 caliber cartridge into the magazine or into the chamber. Poor feeding could cause property damage and or personal injury.

LENGTH _____ 1 in.
 PRIMER _____ Rim fired percussion
 PROPELLANT TYPE _____ 3031
 PROPELLANT WEIGHT _____ 1.5 grains
 BULLET WEIGHT _____ 38 grains
 BULLET DIA. _____ .2225
 BULLET PROFILE _____ R.N.
 VELOCITY _____ 1400 fps
 EFFECTIVE RANGE _____ 200 yards
 RANGE
 1 1/2 mile

Storage

Check function by dry firing without ammunition.

TEST FIRING

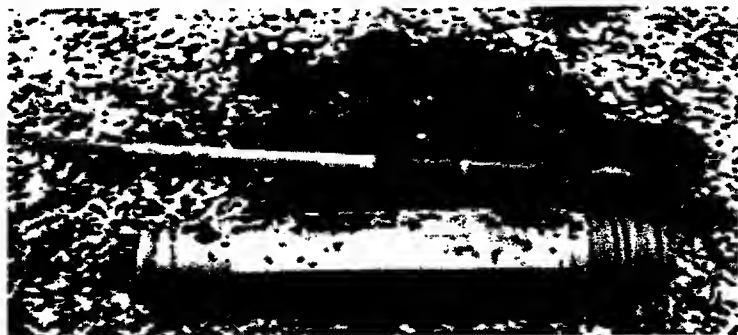
With the safety on.

Place 1 cartridges into the magazine, insert the magazine, chamber the cartridge. Aim the firearm in a safe direction, place the safety on fire position and depress the trigger, the cartridge should fire. Repeat as necessary.

IF IN DOUBT

Have the firearm checked by a competent, Federally licensed gunsmith.

Anytime you put away your AR-7 it should be cleaned and coated with a thin layer of gun oil. Long term storage (which I will consider over 1 year), should be preserved with a thorough cleaning followed by a thick coating of 80 weight (+or-) gear oil as used in automobile rear ends and manual transmissions. If underground burial is intended a suitable tube can be manufactured from 6" PVC plumbing pipe with end caps. Or use the military surplus sonar buoy shown below for underground use, with 4 1/2 gallons of gear oil. Everything will be like new! Put the pistol/rifle, some ammo (SEALED SEPARATELY), clips and fill it up to the top with gear oil. Then use a whole tube of silicon sealer around the screw on cap.



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